

**REMARKS**

**Rejection under 35 U.S.C. Section 103:**

Claims 1 and 22 were rejected under 35 U.S.C. Section 103 as being unpatentable over Rakieski (U.S. Patent No. 4,809,949) in view of Grove (U.S. Patent No. 3,293,342). Both Claim 1 and Claim 22 essentially recite: "A process for manufacturing a valve, comprising: **casting a valve body having a valve seat surface without machining the valve seat surface, molding a plug element without machining**, having a first end portion and a second end portion, wherein the plug element is configured and dimensioned for rotatable receipt within the valve body, and **overmolding at least one deformable sealing ridge onto the plug element**, wherein the at least one deformable sealing ridge is positioned so as to engage the valve seat surface, whereby an effective seal is created between the plug element and the valve body when the plug element is biased into the valve body."

**The process of overmolding is simply to mold material on top of a previously molded product.** This is fully described in U.S. Patent No. 5,182,032 that issued on January 26, 1993 to Dickie, which is hereby enclosed as Appendix A. Applicant's Invention, as claimed, involves the **overmolding at least one deformable sealing ridge onto the plug element**.

In marked contrast, Rakieski does not disclose any overmolding but requires the use of an o-ring seal that has to be inserted and positioned within a groove. "The valve body and plug may be easily assembled to provide a relatively tamper proof assembly. In assembling the valve structure, **an O-ring seal 29 is inserted in a circumferential groove 30 in the upper trunnion section 24**. The plastic valve plug 10 is inserted into the top of the valve body through its open upper end 32. The upper portion 33 of the plug protrudes from the valve body and functions as an actuating member. **Thereafter, a split retaining ring 34 is inserted around the upper portion of the valve plug and slipped into annular groove 36 in the valve body so that it**

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**abuts the upper surface of trunnion section 24."** (Column 4, Lines 15-26). "After placing the moisture seal 55 in place, the assembly is completed with a plastic bonnet cap 58 which fits over the actuating stem 33 into a snap fit in reduced portion 59 of the valve plug immediately above the upper trunnion section. In order to accommodate insertion of the bonnet cap over the externally protruding plug stem 33, the plug stem is tapered somewhat as shown." (Column 5, Lines 16-23). Therefore, Rakieski requires the use of o-ring seal 29, a split retaining ring 34 and a bonnet cap 58 to hold the plug element 10 in the valve body 12. **It is respectfully believed that these components are clearly not overmolded to the plug element.**

**Grove recites and requires machined components.** Grove recites: "The side walls 12 of the body **are machined** to receive the welded-in hubs 13." (Column 1, Lines 70-71). "It consists of a mounting ring 17 which has one end portion **machined** to interfit a machined bore 18 in the valve body." (Column 2, Lines 17-19). "FIGURES 6-11 illustrate my novel method for manufacturing the seal member 21. As shown in FIGURE 6 an annulus 51 is provided, which is in the form of a section of tube. It can be cut from tube stock, or molded. Nylon is a suitable material because of its physical characteristics, which permit **subsequent machining**, and makes it suitable for use as a seal member. The member 51 is dimensioned whereby after certain operations to be described, it forms two separate sealing members 21. The two recesses 38, in the same form as shown in FIGURE 3, are made in the ends of the member 51 **by suitable machining.** ... After forming the member 51 as shown in FIGURES 6 and 7, a suitable resilient material is molded into the recesses 38. ... After completing the curing operation, the member 51 is subjected to **a series of machining operations** indicated by the dotted lines in FIGURE 9." (Column 4, Lines 14-25; Lines 30-32 and Lines 57-59). **Therefore, Grove specifically recites and mandates machining operations to occur to the plug element.** Therefore, it is respectfully believed that it goes without saying that if a prior reference is cited that requires

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some modification in order to properly combine with another reference and such a modification destroys the purpose or function of the invention disclosed in the reference, one of ordinary skill in the art would not find reason to make the proposed modification. In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). In this case, Grove recites and requires machining operations so there is absolutely no motivation to combine Grove with Rakieski. Also, even if the References were combined, it would result in machined components, which is directly contrary to the Applicant's Claimed Invention. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Moreover, the Court of Appeals for the Federal Circuit Court has consistently highlighted the importance of considering the subject matter "as a whole" to take into account all limitations of the claims. Carl Schenck, A.G. v. Nortron Corp., 713 F2d. 782, 218 U.S.P.Q. 698 (Fed. Cir. 1983).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *Manual of Patent Examining Procedure* (M.P.E.P.) Section 2143. In re Rouffet, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998). In this situation, Rakieski is silent with regard to machining of the components as acknowledged by the Examiner and Grove teaches that machining must occur to the components. Therefore, there is no suggestion or motivation to combine the References, there is no reasonable expectation of success since

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there is no hint or suggestion as to what would happen if the components were not machined.

The combination of Rakieski and Grove does not teach all of the elements of the claims, i.e.,

casting a valve body having a valve seat surface without machining or the valve seat surface

molding a plug element without machining. Therefore, it is respectfully believed that the

*Manual of Patent Examining Procedure* (M.P.E.P.) specifically dictates that this rejection is

improper.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Moreover, even if a proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *Manual of Patent Examining Procedure* (M.P.E.P.) Section 2143.01.

The Federal Circuit Court requires that there must be some reason or suggestion for combining the prior art references. It is improper to apply an "obviousness to try" standard or indulge in hindsight evaluation or reconstruction to attempt to arrive at the Applicant's Invention as claimed. See Ecolochem, Inc. v. Southern California Edison Co., 56 U.S.P.Q.2d 1065 (Fed. Cir. 2000). In this case, Grove specifically requires that the machining of the plug element.

There is no motivation whatsoever to prevent machining of the plug element in either Grove or Rakieski. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. In re Jones, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992).

Furthermore, there is no such motivation to combine Grove or Rakieski present in either Grove or Rakieski.

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The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." See id., 916 F.2d at 682, 16 U.S.P.Q.2d at 1432. See also In re Fritch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Moreover, a statement that modifications of the prior art to meet the claimed invention would have been within the ordinary skill of the art at the time the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art, is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). In this case, there is no objective reason to destroy the mandated requirement of Grove by **not machining** the plug element. Therefore, it is respectfully believed that it is well established that "obvious to try" is not a proper basis for a rejection under 35 U.S.C. Section 103.

The Supreme Court held in U.S. v. Adams, 383 U.S. 39, 148 U.S.P.Q. 479 (1966), that one important indicium of nonobviousness is "teaching away" from the claimed invention by the prior art or by experts in the art at (and/or after) the time the invention was made. It is improper to combine references wherein the references teach away from their combination. In re Grasselli, 713 F.2d 731, 218 U.S.P.Q. 769 (Fed. Cir. 1983). In this case, Grove mandates the machining of the plug element as well as the other components.

Moreover, not only are the claim limitations unique when contrasted to Grove and Rakieski, but the Applicant's Invention, as claimed, solves a significant problem of eliminating

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an expensive machining process that requires extensive quality control. It is respectfully believed that ever since Eibel Process Co. v. Minnesota and Ontario Paper Co., 261 U.S. 45 (1923), that the U.S. Supreme Court, the Federal Court of Appeals for the Federal Circuit Court, the Court of Customs and Patent Appeals as well as the United States Patent Office have recognized the longstanding rule that discovery of the source of the problem is patentable even if the solution is deemed obvious (which is not the present situation). In this case, the pitch of a paper-making mesh conveyor was altered to impart a component of gravity to the paper stock. Although it was known that altering the pitch of the paper-making mesh conveyor would alter the performance of the machine, it was deemed patentable to discover that the source of the problem, i.e., ripples in the paper stock, could be eliminated by altering the pitch of the paper-making mesh conveyor. Also, see In re Kaslow, 707 F.2d 1366, 217 U.S.P.Q. 1089 (Fed. Cir. 1983) and In re Sponnoble, 405 F.2d 578, 160 U.S.P.Q. 237 (C.C. P.A. 1969). Therefore, this significant problem is overcome by the Applicant's Invention, as claimed.

Most importantly, neither cited Reference describes an absence of machining for both the valve body as well as the plug element. It is respectfully believed to be axiomatic that claim limitations cannot come into being by the combination of two references that do not disclose this feature. It is respectfully believed that all claim limitations must be considered. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Therefore, Claims 1 and 22 overcome the rejection under 35 U.S.C. Section 103 as being unpatentable over Rakieski in view of Grove.

Claims 2-21 were also rejected under Section 103 as being unpatentable over Rakieski in view of Grove. Since Claims 2-21 depend from and contain all of the limitations of Claim 1, as amended, Claims 2-21 are felt to distinguish over Rakieski in view of Grove in the same manner as Claim 1.

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Although the Applicant deeply appreciates the indication that Claim 22 is allowable with significant additional limitations and augmentations, Applicant respectfully does not believe, as explained above, that any additional amendments are needed and that Claim 22, as currently drafted, is allowable over the prior art.

The patent specification was amended to eliminate a mere typographical error made by prior counsel. No new matter has been added.

If any issue regarding the allowability of any of the pending Claims in the present application could be readily resolved, or if other action could be taken to further advance this application such as an Examiner's amendment, or if the Examiner should have any questions regarding the present amendment, it is respectfully requested that the Examiner please telephone Applicant's undersigned attorney in this regard.

Respectfully submitted,

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